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ORIGINAL LECTURES.

EPITHELIOMA OF THE FACE.

ABSTRACT OF A CLINICAL LECTURE BY PROF. LOUIS A. DUHRING.

Delivered at the University Hospital.

Reported by Dr. ARTHUR VAN HARLINGEN, Chief of the Skin Clinic.

THE patient is an Irish laborer, sixty years of age, who states that he has always enjoyed good health. He attributes the origin of the affection for which he now seeks relief, to a blow received ten years ago from a piece of wood. The wound made at that time soon healed up, but a month later he noticed a little scaling at the locality, together with an appearance of the skin which we may conclude from his account to have been a small patch of induration, perhaps the size of a split pea. Subsequently, a small crust formed, which afterwards, in the course of two or three years, broke open, showing a sore, which has remained about the same size from that time to the present.

On examination we find a quarter-dollar sized, superficial ulcer situated over the right malar bone, roundish in form, with well-defined, abrupt, hard edges. Though shallow, it has a peculiar punched-out appearance; it is covered with a scanty secretion, and bears considerable handling without showing any tendency to bleed. Around this ulcer there is decided induration of the skin, extending over an area about the size of a silver dollar. Near the edge of the ulcer the tissues are reddish, and, on pressure, show decided hyperæmia. It is evident, therefore, that the process involves also the immediately surrounding structures. So much for what we see before us. Let us now determine the diagnosis.

No one who has seen cases of this kind could well mistake the disease. We see that the affection is evidently a neoplasm; it must, therefore, in all probability, be either lupus, syphilis, or epithelioma; and I may say here that it is the latter,—epithelioma,—and an example of the superficial variety.

The following comparison of the more prominent features of epithelioma and syphilis will bring out the diagnosis between these diseases. In epithelioma we

usually find only one original point of disease; in syphilis there may be one, two, three, or more. Epithelioma may exist a long time (in the present instance, ten years) without change; syphilis is more rapid in its course, the ulceration usually going deeper (especially when, as here and in the superficial variety generally, it is solitary). The edge of the epithelial ulcer is everted, hard, and cartilaginous; the edge of the syphilitic ulcer is smooth and sharply cut, and seldom rises above the general surface of the surrounding skin. The secretion of the epithelial ulcer is scanty, viscid or watery, and yellowish in color; the secretion of the syphilitic ulcer is more or less abundant, purulent in character, and yellowish or greenish in color.

It may be mentioned here that slight itching is at times present, but this may usually be allayed by simple pressure applied to the part; it is never so severe as to cause the patient to scratch. The affected locality is painful when handled, but does not spontaneously give rise to this symptom. In syphilis pain is generally absent.

Regarding the differential diagnosis between epithelioma and lupus. The latter tends to diffuse itself, as, for example, over a large portion of the face; the patches and tubercles are apt to be scattered, the disease in almost all cases presenting several centres of deposit. I do not recall ever having seen a case of lupus vulgaris where the disease was confined to a single circumscribed area for so long a period as ten years. A characteristic of lupus is its multiple distribution; in superficial epithelioma we have, as a rule, a single ulcer, shallower and less rapid in its growth than the ulcer of lupus. The ulcer of lupus, moreover, generally shows small, pin-head to pea-sized, deposits scattered around its edges. The size of the ulcer, its shallowness, its edges, its base, its secretion, its course, its chronicity, the age of the patient, the single character of the growth, and its seat, are the signs upon which we depend in making our diagnosis.

Epithelioma is not at all an uncommon disease of the skin, and is worthy of the most careful study. It is a form of cancer, and is known under the several names of epithelioma, epithelial cancer, and carcoid. Epithelial cancer may attack either the external skin or the mucous membrane.

There are three varieties of epithelioma which it is worth our while to name: the superficial, or flat, variety; the deep-seated, or infiltrating, variety,—deep-seated because it attacks the deeper structures, infiltrated because it infiltrates other tissues than the skin, as the lymphatics; and the papillary, or warty, variety. The present case is an admirable example of the superficial, or flat, variety.

Epithelioma of the flat variety usually begins in a sebaceous gland or as a tubercle, or it may be in a milium,—one of those pearly granules often seen in the skin of the face in elderly people. It may also arise in a pigmentary or vascular nævus, at the seat of a contusion or other wound or point of irritation. This little tubercle, when it has once appeared, may continue without change for years, when, from some cause or other, appreciable or not, sooner or later it becomes reddish or swollen, or a little fissure appears, covered with a crust, which when broken away leaves a slightly moist surface. At this stage the patient usually begins to be alarmed, and consults his physician; it may remain in this condition for months or years without further growth, until, perhaps, the patient is carried off by some intercurrent disease; or it may enlarge itself, as very often happens. In the present case we may conjecture, from the amount of infiltration present, that a year hence would see a marked change for the worse.

The following case, still fresh in my mind (continued the lecturer), will illustrate the features and course of epithelial cancer when it takes on the deeper action constituting the deep-seated variety of the disease.

I was consulted about a year ago by an otherwise perfectly healthy, well-nourished, strong gentleman, sixty odd years of age, who displayed upon the bridge of his nose a reddish tubercle, raised, acuminate, about the size of a split pea, and looking very much like a highly-inflamed acne papule. There was no family history pointing to cancer. He stated that the tubercle had begun as a small pimple two months previously, and that within the last few weeks a crust had formed upon it, and that it had gradually grown to the size mentioned above.

The crust having been removed by a poultice, showed the existence of a small

excavated, conical ulcer, with surrounding hyperæmia, considerable infiltration, and an angry look which plainly indicated that the disease-process was a very active one. The prognosis was grave. The disease was operated upon by caustic potassa, and not only the growth destroyed, but a considerable area of surrounding healthy tissue as well. In two weeks the sore had almost, but not altogether, healed. Within a month from the date of operation, however, the disease had again broken out with increased virulence, a portion of the tissues breaking down and showing a small finger-nail sized, deep, reddish ulcer. The same operation was again performed, even more thoroughly than before, the tissues for a still wider space around being thoroughly broken down and destroyed, notwithstanding which, within a month the patient's condition was as bad as ever. A crater-like ulcer, the size of a quarter of a dollar and about one-fourth of an inch deep, now showed itself. It presented an everted edge which was purplish in color, puffy, bled easily when touched, and gave rise to lancinating pains, especially severe at night.

By this time it had become evident that the disease was one of those malignant forms of epithelioma which go on so rapidly in their destructive course. After consultation with Prof. Agnew, an operation with the knife was determined upon. The whole nasal bone and the entire portion of diseased structure surrounding it was removed. The wound granulated favorably, but, nevertheless, within a few weeks the tissues showed unhealthy granulations again, and in a short time began to break down. Another caustic operation was then performed, chloride of zinc being employed. The pain caused by this application was intense, and the result unsatisfactory. The whole cheek became involved, the disease spreading rapidly; the ulcer extended over the healthy side of the nose, and also involved the lower eyelid, leaving a deep cavity upon the side of the face the size of the palm of the hand; the edge was purplish, puffed, and greatly everted, and the affection the seat of severe lancinating pains.

The patient's health broke down early in the course of the disease, marked by debility, emaciation, and a general cachectic look, accompanied by violent pain in the part, and much suffering. The case terminated fatally within thirteen months from

the first manifestation of disease. It is seldom that epithelioma pursues so rapidly fatal a course. Several years are usually occupied in bringing about such destruction as occurred here.

To return to the superficial variety. This may sometimes pass into the deep-seated form, but such an event is uncommon. When the flat epithelial cancer goes on breaking down and extending deeply at a slow pace, the affection has received the name of "rodent ulcer."

Such, in outline, is the disease known as epithelioma. Of the papillary variety I shall speak on another occasion. Its treatment is destruction of the growth with caustic, electrolysis, or the knife. [The patient before the class was then treated with caustic potassa in stick form, the base and edges of the growth being completely destroyed. The wound was dressed with diachylon ointment.—REP.]

ORIGINAL COMMUNICATIONS.

THE ANATOMY OF THE CEREBRUM.

BY HARRISON ALLEN, M.D.

THE difficulties attending the study of cerebral disease do not always cease with the autopsy, since the results of examination of the skull-contents, as ordinarily conducted, are too frequently inconclusive and contradictory. To invite attention to the necessity of more extended study of the brain,—namely, the microscopical anatomy, both in health and disease,—with a view of lessening, if possible, such discouraging results, is the chief object in preparing this article.

A secondary object is to emphasize the importance of determining the ranges of variation in the brains of idiots and others, and also the possible deviation from the adult standard in old age.

Every physician well knows that, after the closest study, the lesion does not always hold the anticipated relation to the symptoms. It is enough for the candid reader to accept the indications held out by anatomy and physiology, for it is by these alone that clinical histories can be interpreted.

The plan of the cerebrum is briefly as follows:

(1) The optic thalamus at its junction with the crus cerebri is the point upon which the cerebrum turns downward to form the temporo-sphenoidal lobe. Thus the fornix describes a curve from the front of the base of the thalamus in front to the base of the descending horn behind. Concentric within the curve of the latter is the dentate convolution, and beyond it, but beginning at about the level of the corpus callosum, is the hippocampal sulcus. The corpus callosum not only separates the region of the thalamus from the upper portion of the cerebrum, but it makes the calloso-marginal convolution continuous with the hippocampal convolution. The extension of the occipital lobe backwards determines the calcarine and parieto-occipital fissures.

(2) The striated body is the point from which the anterior portion of the brain turns upward. Hence we have on the median surface the calloso-marginal convolution curving round in front of it. The space between this convolution and the upper surface is occupied by others more or less concentric therewith.

(3) The olfactory bulb determines the position of the straight sulcus, and, through the union of the peduncles with the corpora quadrigemina and the optic thalamus, occipital and temporo-sphenoidal lobes, gives unexpected importance to parts remote from one another.

Thus, while the anterior portion of the cerebrum is moulded about the striated body, the middle and posterior parts are moulded about the optic thalamus. When the relation of these two ganglia with the crus cerebri is remembered, viz., the under surface or *crusta* belonging to the first mentioned, and the upper surface or *segmentum* pertaining to the last, we are prepared to learn that the anterior lobes are connected with motion, and the middle and posterior with sensation. The commissural union of the olfactory and optic centres with the latter region is in harmony with this identification. Meynert (Stricker's Manual of Histology, 1872, ii. 409) has affirmed that the temporo-sphenoidal and occipital lobes have direct association, and has shown that patches of sclerosis occur therein in some cases of atrophy of the optic nerve.—(*Æster. Zeit. f. prakt. Heilkunde*, 1869, 14.)

The association of lesions of the anterior portion of the cerebrum with hemiplegia

of the opposite side is well established, and also of aphasia with morbid changes in the parts surrounding the island of Reil.

The difference in appearance of the frontal and the temporo-sphenoidal and occipital lobes is very striking. In the frontal lobe we have associated with the septal area the olfactory bulb as well as the genu and rostrum of the corpus callosum. But while thus compact, fixed, and entering largely into the median parts of the base of the brain, and sending a fasciculus and a special layer of cerbea to the temporo-sphenoidal lobe, it is without any fissure answering to central structure. The temporo-sphenoidal and the occipital lobes (considering them together, which is tenable) are, on the other hand, determined by the curve of the dentate convolution and fimbriated body around the thalamus. These parts are disposed laterally, and are thus, at least towards their distal ends, free, and form the posterior boundary of a deep fissure (the beginning of the descending horn of the lateral ventricle). Neither of these lobes is fixed to the corpus callosum, while this latter structure projects and yields a free border. Both lobes possess distinct and constant fissures,—the hippocampal for the temporo-sphenoidal and the calcarine for the occipital,—which correlate to important central structures. These fissures tend to relax the firmness of the cortex, a tendency still further aided by the deep parieto-occipital and collateral fissures. The median surface as it joins the outer is marked by several sulci besides the parieto-occipital. Such sulci are scarcely ever seen in the frontal lobes.

We are prepared to learn that the greatest variability exists in the sulci and convolutions of this portion of the cerebrum, particularly in the occipital portion, which being the last to be formed (both in the individual and in the species) is the most liable to slip back in its detail of formation. In a word, the principle of reversion finds illustration in the variations of the sculpturing of the cortex.*

It is true that great variation also exists (see Weinert on supra-orbital convolutions in different races: *Med. Jahrbücher*, xix.,

1870) upon the under surface of the frontal lobe at its outer portion, with reference to the arrangement of the inner, middle, and outer convolution (tri-radiate of Turner) with the transverse basal convolutions. But these exist in less degree than those already noted.

The value of the fornix as a means of union between the base of the brain and the temporo-sphenoidal lobe is enhanced when we remember that the dentate convolution is an outgrowth from the fornix behind, according to Schmidt (*Zeit. für Wissenschaft. Zool.*, xi.), while fibres pass from the anterior column of the fornix to the septal area in front. It is by no means a rash statement that the calloso-marginal sulcus is first determined not by the corpus callosum, but by the striated body, and possibly by the septal area aided by the aberrant fibres of the fornix, while we know that the hippocampal sulcus is fixed by the dentate convolution and fimbriated body. Now, the hippocampal sulcus is continuous with the calloso-marginal over the posterior free edge of the corpus callosum, and in congenital deficiencies of this commissure it is probable that the median surface of the cerebrum will be found to present a continuous arched sulcus from the base of the brain in front to the base of the temporo-sphenoidal lobe behind.

In studying the brains of idiots we find that the most constant among the smaller convolutions, according to Marshall (on a brain of a Bushwoman and of the brains of two idiots of European descent: *Philos. Trans.*, 1864, 501), are the three frontal convolutions, the supra-marginal and angular convolutions, the temporal convolutions on the outer side of the cerebrum, and the marginal, calloso-marginal, and annectant convolutions with the quadrate and cuneate lobules on the inner or median side.

The most inconstant are the outer orbital and the occipital convolutions. Thus the parts influenced by the presence of the basal ganglia are the most constant, while those remote from these are subject to great variation.

Among other features of the brain of the idiot may be mentioned the reduced size of the island of Reil and of the striated body,† the former being without convolutions, and the latter having associated with it a small

* The constancy of the calcarine fissure in the mammalian brain being pronounced in lower types of brains of the placental mammals, is in apparent contradiction to the assumed position that the occipital lobe is an outgrowth from the temporo-sphenoidal. It is necessary to go below the placental mammals to obtain the true evidence. In marsupials and monotremes the calcarine fissure is absent, but the dentate fissure is present throughout.

† Also the *Stoculus*.

corona radiata. It is evident, from Marshall's figures (although he makes no allusion to it), that the parieto-occipital fissure is remarkable for sending a long anterior branch downward and forward. It is of interest to notice the same branch in the brain of the *chimpanzee*. The great relative development of the first temporal sulcus and its occasional union with the parieto-occipital fissure, and the extension of the calcarine fissure backward to the apex of the occipital lobe, are characters seen in some of the quadrumana.

Such considerations pertain to pathological science, as studies of arrests of development, apart from their general interest. The more we recognize the essential points of structure present in the human brain, even in the lowest races and in idiots, the nearer we are to seizing the essential lesions in mischief coming to the organ itself.

In this connection we give a hint of a most important line of study, the outline of which is even now scarcely discernible, viz., the changes that occur in the cerebrum as effected by age and habit.

How is the training of a feeble-minded child accomplished? As commonly given the answer is, "By improving the quality of its brain." Is it rash to suppose that a brain characterized by arrest of development may actively renew under favoring conditions the process which had ceased? A small striated body and feebly developed corona radiata may become more decided, and, in consequence of this, sulci may make their appearance upon the island of Reil. However we may trace the lines of improvement, it is possible that they depend not merely upon improving the quality of the brain-substance.

Physicians in charge of institutions for training the feeble-minded are in position to occasionally secure the brains of those who had improved under treatment. By careful comparison of such brains with those already recorded, much of interest might be secured.

The following extract from Flower's memoir on the posterior lobes of the cerebrum of the quadrumana (*Phil. Trans.*, 1863, 189) is of significance, and may be quoted in this connection: "Many variations in the construction of the posterior (occipital) lobe must be ascribed rather to pathological changes than to original conformation. Thus in aged and debilitated subjects the posterior cornu is often enlarged and some-

what funnel-shaped, the calcarine process (hippocampus minor) being more or less obliterated, a circumstance arising from the gravitation of the intra-ventricular fluid during long-continued recumbent position. In atrophy of cerebral substance from whatever cause, attended by increased size of the ventricular cavity, the change is usually most strikingly seen in the posterior cornu."

The relation between the brain-tissue and the arteries supplying it is such that the lesions of the former demand a careful consideration of the latter. It has been shown by Pintrac (*Traité théorique et pratique des Maladies de l'Appareil nerveux*, 1869, ii.) that by far the greater number of cerebral hemorrhages occurred in structures supplied by the anterior and middle cerebral arteries. Out of five hundred and sixty cases collected by him, the occipital lobes, which are supplied by the posterior cerebral, were the seat of hemorrhage in thirty-three instances. Duret (*Archives de Physiologie*, 1873-1874, 316) has shown that the caudate nucleus of the striated body receives fewer twigs from the anterior cerebral than the lenticular ganglia. Hence we are prepared to learn of Broadbent (*Roy. Med. and Chir. Soc.*, rep. in *Med. Times and Gazette*, July 15, 1876) that hemorrhage is apt to occur towards the outer part of the corpus striatum, notably between the lenticular nucleus and the outer white capsule. The clot may here, by its outward pressure, obliterate the convolutions of the island of Reil, though rarely rupturing the cortex.

C. H. Jones (*Medical Times and Gazette*, May, June, 1872, 503, 562), in reviewing the relation between the locality of the morbid foci and the symptoms, has reached the following conclusions: 1st, That the locality of the lesion will be elected by reason of impairments of nutrition already predetermined. 2d, That pressure, as illustrated by the presence of large clots of blood, seldom yields special or localized lesions, but coma and general paralysis. 3d, That irritation, as from disturbances excited by local change, more or less abruptly induced, results in convulsions, hemiplegia, or paralysis of distinct cranial nerves. 4th, "That morbid states of a given centre may so affect other centres with which it is commissurally connected as to disorder or arrest their function." The acceptance of

the last-mentioned statement explains the difficulty of diagnosing cerebral lesions without an exact knowledge of the minute anatomy of the brain.

According to M. Benedikt (on the Laws of Topog. Diag. in Chr. Diseases of the Nervous System: *Allg. Wien. Med. Zeit.*, 1873; tr. in *Jr. Psych. Med.*, N. S., i., 1874, 34), it is necessary to locate the symptom in its appropriate centre, and not to carry attempts at centralization too far. He esteems highly the fact that a pronounced centre, such as the quadrigeminal mass or a cerebellar hemisphere, may exert a controlling (co-ordinating) influence over the function of an adjacent motor tract. Thus a damage to either of the above structures may lead to paralysis without any motor nuclei being directly involved.

The same writer assigns to Betz, but without reference, the very important statement (if true) that the *claustrum* (i.e., the cerbea as modified at the island of Reil) is the region of aphasia, and that it possesses at its posterior part "a central ganglion" for the hypoglossal nerve.

In conclusion it may be said:

(1) That in seeking for lesions of the cerebrum, the lines of commissural association must be considered.

(2) That in studying arrests of development of the cerebrum, comparison of the brains of idiots and lower races of man and animals should be insisted upon.

(3) That the greatest variations in the cerebrum are seen in the areas of least compactness, the occipital lobe being the most variable.

(4) That careful study should be given to the brains of the feeble-minded who have improved under treatment, and to the possible changes in the arrangement of the parts of the cerebrum under the influence of age, disease, or both.

CASE OF SPINAL PARALYSIS OCCURRING DURING RECOVERY AFTER PARAPLEGIA FROM POTT'S DISEASE.

BY V. P. GIBNEY, M.D.,

Assistant Surgeon to the Hospital for Ruptured and Crippled, New York.

J. W., æt. 3½ years, presented at the Outdoor Department of the Hospital for the Relief of the Ruptured and Crippled, giving a history about as follows:

Considered healthy up to fourth or fifth

month of life, though the head was always regarded as unnaturally large, and seemed too heavy for the body. When five months of age he was thrown from a rocking-chair, and no immediate injury was detected; in fact, two months elapsed before the mother's attention was called to anything abnormal. She then noticed a marked tendency to opisthotonos, pain on being handled, and general peevishness. A month or two later she fancied that the spine was "growing out," and applied for treatment, May 8, 1874, the child being then one year old. I could detect no angular prominence of any of the spinous processes, only a uniform antero-posterior curve, which was easily reduced by extension. At the time I regarded it as a case of rachitic kyphosis, and prescribed cod-liver oil and phosphate of lime, giving directions as to the diet. One week later I feared incipient caries of the vertebræ, and applied a spinal brace. The mother became very irregular in her attendance, and I saw the child only once or twice between that time and October 23, when she called because the child had lost the use of its lower extremities. The brace had been left off, and on examination I found a marked prominence in the superior dorsal region, and a rigidity of the muscles of the lower extremities, accompanied with general incoördination of movement. A new apparatus was applied, and a spring to support the weight of the head attached thereto. The mother was assured that the power would be restored in due process of time. Six months later a residual abscess appeared immediately to the right of the transverse process of the tenth dorsal vertebra, running in a comparatively rapid course. Returning control of the extremities was very apparent during this period. The condition of the sphincters of the bladder at the time I failed to note, but from the mother I have since learned that the urine would pass involuntarily.

During the summer of 1875, about ten or eleven months later, the child was walking about by means of a chair, and could even stand alone. The spinal abscess had closed, and there was now present a small perineal abscess, which gave considerable annoyance. In August the mother called my attention to a "turning of the right foot," and on examination there was found almost complete palsy of the right lower extremity, while the faradic contractility was abolished. With the galvanic current a feeble response in the quadriceps was discovered, though this was doubtful.

Electrization was begun, and sickness in the family prevented a regular attendance. The condition of the child on the 30th of October was that of a stout-looking boy, whose general health was reported as very good, with the exception of a slight bronchitis of recent origin. He could stand with a little assistance, resting the most of his weight on the left lower extremity, the foot of which was in marked

valgus, doubtless from an unequal distribution of the weight. The right leg hung apparently powerless. The head seemed large, and the measurements thereof were twenty inches around the largest portion, and eleven inches from tip of one ear to the tip of the other.

The prominence of the diseased vertebræ (fourth to eighth dorsal) was one inch. An oval cicatrix was found on the right of the tenth dorsal vertebra. There is every reason to believe that ankylosis between the bodies of the vertebræ has taken place, and Pott's disease may be considered as practically cured. The child is still under treatment for the spinal paralysis, and the prognosis, I am free to confess, is by no means favorable.

Remarks.—My apology for reporting this case is, that my own interest has been aroused, and that I regard it as one comparatively rare. My opportunity for observing the various paralyses during the past four or five years has been exceptionally good, and I do not remember to have ever seen a case of true spinal paralysis in connection with Pott's disease of the vertebræ. The paraplegia so often attending caries of the spine is not a paraplegia wherein we have flabbiness of the muscles, abolition of reflex excitability, and faradic contractility. Any one who has ever seen a case will readily recall the rigidity of the flexors and adductors, the epileptiform spasm when the limbs are placed in certain positions, the general incoördination, and the strong urinary odor that is emitted from the clothing.

I have talked with two or three of my friends in the city who are regarded as authority in diseases of the nervous system, and they have indistinct recollection of having seen or read of a case similar to the one I have reported.

The etiology of the spinal paralysis is unquestionably, I think, found in the extension of a meningeal inflammation to the parenchyma setting up a localized myelitis of the right anterior column.

Whether the residual abscess, so exceptionally close to the spinal cord, had any influence on the inflammatory process, I am unprepared to decide.

135 E. FORTY-SECOND STREET, November 21, 1876.

NOTE ON HYDROBROMIC ACID.

BY J. MILNER FOTHERGILL.

I HAVE just perused with satisfaction the remarks of Dr. McLane Hamilton on this useful therapeutic agent. His cases

are very illustrative of its action. A friend told me the other day that he had prescribed it for the nervousness and flushings of the change of life with excellent effect.

I may add that it is most useful in that form of excitable neurosal palpitation found in women along with general nervousness. In such cases, given with quinine, and, in some cases, a small dose of digitalis where the heart is weak, it produces the most satisfactory results.

It also forms part of a really charming cough-mixture, efficient as well as palatable. The form is as follows:

R Sp. chloroform., ℥ xx;
Hydrobromic acid, 3ss;
Syr. scillæ, 3i;
Aq. ad 3i, ter in die.

The dose, of course, is reduced for children. Any other acid in this mixture is very agreeable, but the hydrobromic acid, from the effect of bromine upon reflex mechanism, allays the cough often so troublesome. It possesses much the same action as opium, without the ill effects upon the digestive organs or on the bronchial secretion.

LONDON, W., November 14, 1876.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. GROSS, OCTOBER 4, 1876.

Reported by WILLIAM A. JOHNSTON, M.D.

EXCISION OF THE HEAD OF THE HUMERUS.

THE patient now before you is a medical gentleman, 26 years of age, who, three years ago, was thrown from his buggy on his right shoulder, receiving a severe contusion, followed by the usual symptoms of inflammation. You observe a cicatrix situated about the middle of the arm, at which, as we are informed, there was a continuous discharge for a year and a half, beginning soon after the accident. After the parts healed the joint was ankylosed. About six months ago the same shoulder received a similar injury. You now notice two fistulous openings upon the anterior surface of the injured shoulder, from which there is a constant discharge of a fetid character. On introducing the probe, I find that one of these fistulous tracts leads directly into the articulation, while the other inclines upward towards the coracoid process. By firmly grasping

the scapula, and at the same time moving the arm, you observe the joint has lost its functions. The deltoid muscle is wasted from the joint effect of disease and the want of exercise.

The patient's general health is good. He tells us he never had disease of any kind, and knows of no hereditary taint.

Anchylolysis is generally produced by inflammation of the synovial membrane, with plastic deposits upon its surface. It may arise from all kinds of injuries. In this patient there was a contusion giving rise to synovitis, and an effusion of plastic matter. This matter became organized, bands of adhesion formed, and the joint became fixed and immovable. The inflammation extended to the periosteum, and necrosis and absorption of the articular cartilages took place. The glenoid cavity was effaced, and the tissues within and around the joint became roughened and bound down by organized plasma.

When the anchylolysis is of recent standing, when the adhesions are weak and of limited extent, and when the joint is not too complicated in its structure, a reasonable hope of breaking up the morbid adhesions and re-establishing the functions of the joint may be entertained; but under opposite circumstances it is useless to resort to any thing short of excision as likely to be of any permanent benefit. Necrosis and caries of the head of the humerus and contiguous surface of the scapula are the most common reason for resection, and render the operation necessary in this case. The mortality from excision of the shoulder- and elbow-joints, even in traumatic cases, is comparatively insignificant, while excision of the wrist and hip very frequently proves fatal. It is more dangerous in the knee than in the hip, and from excision of the ankle-joint very few recover. Excision of the head of the humerus was performed successfully by Prof. Warren, formerly of Baltimore, to relieve the pain caused by pressure of the head of that bone upon the axillary plexus of nerves, in an unreduced dislocation. The late Prof. Blackman, of Cincinnati, performed a similar operation with equally happy results on account of rheumatic arthritis.

There are several methods of exposing the bone. Some prefer the V-shaped incision, others the flap operation. The elder Prof. Pancoast makes a curvilinear incision. These methods afford the surgeon ready

access to the joint, and enable him to effect excision with the greatest facility; but they all have the disadvantage of inflicting severe injury upon the deltoid muscle in consequence of the division of its fibres. The simple vertical incision that I am in the habit of using is free from this objection. The incision is begun just below the acromion process, and is carried down through the belly of the deltoid muscle to within a short distance of its inferior attachment. After the parts are exposed it is of primary importance to detach the periosteum, which is so indispensable to the formation of new bone. We must avoid cutting the long head of the biceps muscle. You notice, as I cut down upon the parts, that there is considerable hemorrhage, due to the indurated condition of the tissues from plastic deposits, which prevent retraction of the vessels. You will observe in this case the use of acupressure in controlling hemorrhage. After the tissues are all separated by rotating the arm, there is little difficulty in protruding and removing the head of the humerus. Other things being equal, the smaller the portion of bone removed, the less impairment of function will there be liable to follow. I find the glenoid cavity effaced, the articular cartilage on the head of the humerus destroyed, and some softening of the osseous tissue. A cold compress will be applied to the wound for a couple of hours. The parts will then be brought together and retained by a few interrupted sutures, an oil-tent being placed in the most dependent part to facilitate drainage. The limb will be firmly secured to the body by adhesive strips assisted by the roller, and suffering relieved by a hypodermic injection of morphia.

[The patient was again before the class, six weeks subsequent to the operation, and on the eve of his departure for his home in California. The parts were in a good condition, the patient having suffered no untoward symptoms. The wound was closed, with the exception of a small point at the most dependent part, from which there was still a slight discharge of a healthy character.—W. A. J.]

SURGICAL CLINIC OF PROF. GROSS, OCTOBER 14, 1876.

EPITHELIOMA OF THE BREAST.

You observe that the right breast of this patient, L. A., æt. 35 years, unmarried, is completely effaced, and in its stead there is

a large raw ulcerated surface, from which there is a constant discharge. There is a slight projection of the nipple. The pectoral muscles are rigid. The patient complains of an occasional pain. I find no enlargement of the glands in the axilla, but in the lymphatic chain along the lower border of the great pectoral muscle are hard nodules, indicating their secondary involvement by absorption of the cancerous material. This disease first made its appearance seven months ago, in the form of a small wart-like excrescence, which gradually involved the whole gland; and four months later the overlying structures were undermined and broke down, leaving this large scarlet-red ulcer. The patient sleeps well, her appetite is good, and her general appearance indicates a fair condition of the system.

This rapid destruction of tissue and secondary lymphatic involvement indicate malignancy.

Scirrhus of the breast is not unfrequent, especially between the ages of forty-five and fifty years. It rarely ulcerates under twelve months, and usually the nipple is retracted.

This is an epithelioma, exactly like the sore frequently seen on the lip, and characterized by the development of epithelial cells. It is a form of disease rarely seen at this age and in this situation. It is most frequent at the mucous outlets.

Epithelioma is more common in men than in women, the latter being more liable to scirrhus. The pain is like that of scirrhus, sharp, darting, or pricking, and often extending to the surrounding parts. Generally there is no lymphatic involvement until after the eighth month. The secondary lymphatic involvement depends upon the absorption of the cancerous material, and is of the same nature as the original disease, though it is often some distance from it. The disease here has advanced too far to warrant an operation, therefore our treatment can only be palliative. We will pay proper attention to the secretions, and give anodynes to relieve pain and procure rest. I shall order as a local application a strong solution of acetate of lead, and around the margin of the ulcer to be painted with diluted tincture of iodine.

It is stated that cinchona cultivation is being enthusiastically entered upon in Burmah by the natives.

TRANSLATIONS.

RECENT INVESTIGATIONS INTO THE ACTION OF JABORANDI.—The *Centralbl. f. Med.*, Nos. 24 and 25, 1876, contains an abstract of recent investigations by Stumpf, Pilicier, Craig, and Schwahn, regarding the action of jaborandi upon men and animals. Stumpf's conclusions are based upon fifty cases of persons with or without fever, to whom the drug was administered in the form of infusion taken cold, the patient being lightly covered. The excretion by lungs and skin in forty-four cases varied from 98 to 895 grm., the average being 474 grm.; while patients treated at the same time in a precisely similar manner, only without the administration of jaborandi, showed an average loss of 90 grm. The increased secretion of saliva, which persisted for a longer time than the diaphoresis (the latter lasting two hours and seven minutes, the former two hours and eighteen minutes), amounted on an average to 258 grm. The maximum was 560 grm., the minimum 39 grm.

Analysis showed the saliva to contain less organic matter and sulphocyanide of potassium, while, in most instances, the salts were increased, so that, taken altogether, the fixed constituents of the saliva remained in about the normal proportion, or, in one case, exceeded this. In three-fourths of the cases the nasal and lachrymal secretions were increased. The bronchial secretion was also somewhat increased. No qualitative change was observed in the urine; quantitative examination was not made. Almost invariably, jaborandi lowered the temperature of persons without fevers; less frequently those suffering from fever. The average reduction was 51° C. in the former, and 7° in the latter. This reduction began frequently before the commencement of the stage of sweating (enlargement of the cutaneous vessels). The pulse was almost always quickened; the respiration sometimes increased, sometimes decreased in frequency. Among the disagreeable effects were nausea, more rarely vomiting. Somnolence and headache were occasionally observed, and, in three cases, painful micturition.

Pilicier speaks less favorably of jaborandi, especially as regards its effect upon the skin, which he found very moderate. (The quantities were not measured.) The

sweat was at first acid, later neutral, and frequently somewhat alkaline. The sialogogue effect was almost always present; the secretion was wanting in sulphocyanide of potassium. The temperature sank in the course of two to three hours from 3° to 1° C. In rabbits, dogs, and cats, jaborandi caused increased secretion of saliva and tears, together with diarrhoea and increased intestinal peristalsis. In the two latter, vomiting, frequent urination, and trembling occurred. Large doses in the case of dogs and cats brought on symptoms of poisoning, with dyspnoea, slowness of pulse, and slight convulsions, and death in the course of a few minutes.

Gastric fistulae showed increased secretion of the juices of the stomach, even when the saliva was not swallowed. The antagonism between jaborandi and atropia showed itself in various cases most strikingly. Contrary to Vulpian's experience, Pilicier found the biliary secretion in rabbits diminished after injections of jaborandi. In common with that investigator, however, P. found diastolic cessation of the heart to result in frogs. Pilicier thinks there is a close resemblance between the actions of jaborandi and muscarin.

Craig examined pilocarpin, the alkaloid of jaborandi, which he found active. It is a semi-fluid, yellowish in color, and soluble in water. It lacks the acid reaction and peculiar odor of the jaborandi infusion. One grain of the alkaloid is equal in effect to a drachm of leaves.

Schwahn found the effect of jaborandi upon the saliva of the parotid in the dog unchanged after section of the chorda together with the neighboring portion of the sympathetic. An opened vein in the parotid poured out an increased quantity of blood under the influence of the drug, also observed after section of the chorda. In rabbits a large quantity of lumpy faeces were spasmodically ejected. A greatly increased peristaltic action of the whole intestine was also observed. x.

ANATOMICAL ALTERATIONS IN CHOREA.

—The origin of chorea has for some time past been believed to lie in alterations of the central nervous system. Rokitsky was the first who demonstrated hypertrophy of the interstitial tissue in the brain and spinal cord, and the researches of Meynert assigned the gray substance of the great central ganglions as the seat of the disorder. Dr. Elischer, who had occasion to

make an autopsy of a woman who had suffered from chorea and who had died of puerperal endometritis, proved clearly that not only in the peripheral nerves (sciatic and median of the arm), but in the cord and brain, this hypertrophy of the connective tissue existed. The nervous elements were atrophied, opaque, the cylinder axis had disappeared, there were limited extravasations of blood, plethora of the capillaries, and an abundant production of granular and fusiform nuclei. In the lateral and posterior columns of the cord the nervous tissue resembled a coarse felt crowded with these nuclei.—*Le Mouvement Médical*, 1876, p. 624; from *Annales Méd. Psycholog.* x.

ANÆSTHESIA OF THE LARYNX BEFORE OPERATION.—Dr. Thaon, of Nice, gives (*Le Prog. Méd.*, 1876, p. 704) the following account of the procedure of Türk and Schrötter, as practised successfully by himself. There are some patients who suffer with such acute sensitiveness of the larynx as to render any operation in this region exceedingly annoying and difficult. The following method, if followed carefully, will prevent this extreme sensibility. If the operation is to be performed on a given morning, the patient's laryngeal mucous membrane should be touched the evening before, at seven o'clock, with a pledget of charpie dipped in chloroform. This should be repeated twelve times, and will bring on congestion favorable to the subsequent application. At eight o'clock the same operation should be repeated, a saturated solution of chloride of morphia being substituted. Care must be taken that this is not swallowed. By way of antidote, the following gargle should be used between each application: Tannin, gr. 160; alcohol, 3iv; aq. destillat., 3xij. Towards midnight the patient should be visited, to see that poisoning by morphia has not taken place. By seven A.M. the larynx is usually insensible. If not, the operation may be repeated. x.

THE ACTION OF ANTIMONY.—Gähtgens (*Centralbl. f. Med.*, No. 18, 1876), having conceived the idea that the preparations of antimony might be found to exercise an influence in increasing the transformation of nitrogenous constituents within the body, undertook a series of experiments with the view of ascertaining the facts. G.'s experiments were made upon two dogs, to which antimonial tartrate was adminis-

tered after several days' fasting. In both cases the amount of nitrogen excreted in the urine was found to be very markedly increased. x.

INTERNAL USE OF SALICYLIC ACID.—M. Cassan, observing the slight solubility of salicylic acid in water and alcoholic liquids, sought and found an adjuvant, the citrate of ammonium, which aids greatly in the solution of this substance in water.

The following are two of his formulæ:

R Acid. salicylic., 3i;
Ammon. citrat., 3ss;
Spiritus vin. gal., f3vijss;
Aquæ destillat., ad f3vi.—M.

This solution contains about five grains of salicylic acid to the tablespoonful.

R Acid. salicylic., gr. xv;
Ammon. citrat., gr. xxx;
Syrupi simpl., f3viiss;
Aq. destillat., ad f3iv.—M.

TREATMENT OF ACNE.—M. Rodet, of Lyons, prescribes the following treatment in acne. Friction is to be made every evening over the acne papules, with the following ointment:

R Adipis, 3v;
Sulphuris,
Tannin, aa gr. viij ad xv.—M.

In the morning the face is to be bathed with warm water to which a little bay rum has been added, the proportion being increased from day to day until it amounts to one-third. M. Doyen, of Lyons, recommends bathing with the following:

R Aq. destillat., f3x;
Hydrarg. bichlor., gr. xxx;
Tinct. lavanduli, f3iiss.—M.

Mr. Hardy uses this formula:

R Aquæ, f3x;
Potassii sulphuret.,
Tinct. benzoini, aa 3iiss.—M.

Two teaspoonfuls in a glass of warm water to be used externally. For the treatment of acne erythematosum (*couperose*), Hardy suggests the following:

R Hydrarg. protiod., gr. iss ad. ii;
Ung. aq. rosæ, 3iv.—M.

In the fluid and concrete forms of sebaceous acne, Hardy uses the following glycerole:

R Glycerin, f3xv;
Aquæ rosæ, f3iiss;
Tannin, 3i.—M. Sig.—Use externally.—*La France Méd.* x.

STRETCHING OF NERVES IN THE TREATMENT OF CENTRAL NERVE-LESIONS (V. Nussbaum: *Centralblatt für Chirurgie*,

1876, No. 39).—As a proof that this mode of treatment can be used with good effect, not only when the affection is peripheral but also when it is central, Nussbaum reports the following case. The patient, a man aged 35 years, fell from a height eleven years previously, and as a result suffered complete paralysis of the lower extremities and the sphincters and intense chronic cramps of the legs. After the failure of other methods for the relief of these cramps, the crural and ischiatic nerves of the right side were exposed by incisions and drawn out with the bent finger, and strong traction made upon them. The chronic contraction upon the right side immediately ceased. The operation and the after-treatment were performed according to the method of Leslie, and both wounds were entirely healed at the end of two weeks. The same operations, with the same results, were then performed upon the left side. After the disappearance of the chronic cramps, the patient, who had previously been bed-ridden, was able by the aid of supports and crutches to move himself about. W. A.

THE ACTION OF ASTRINGENTS ON THE BLOOD-VESSELS (Rosenstorn: *Centralblatt für die Med. Wissenschaften*, 1876, No. 35).—These experiments were made by bringing solutions of nitrate of silver, acetate of lead, tannic, gallic, and pyrogallie acids, sesquichloride of iron and alum, in contact with the mesentery of the frog, and determining with the micrometer their effect upon the vessels which were thus subjected to their influence. The solution of the nitrate of silver was of a strength of one-tenth per cent., and its effect in producing contraction of the vessels was the most remarkable. The contraction came on after the expiration of a few seconds, and frequently diminished by one-half the calibre of the arteries and veins, but was less as regards the capillaries.

Permanent cessation of the circulation of the blood in the affected capillaries occurred, but in the arteries and veins it was sometimes but momentary. Contrary to expectation, tannic acid exerted an opposite influence. Under its influence, arteries, veins, and capillaries became distended, and showed themselves distended with blood-corpuscles. These enlarged vessels immediately contracted again upon the application of the solution of the nitrate of

silver. The effect of gallic and of pyrogallic acid was exactly similar to that of tannic. The action of the acetate of lead was the same as that of the silver salt, but less marked. Almost without exception, white coagula, formed of colorless blood-corpuscles, made their appearance in the vessels. The solution of the perchloride of iron, in the strength of ten per cent., had no appreciable influence, but when fifty per cent. in strength, some diminution of the calibre of the vessels was produced, but less than followed the action of the acetate of lead. This contraction was limited to the arteries and veins, and was accompanied by a dilatation of the capillaries.

The experiments with a solution of alum gave negative results, as its action was not the same in different cases. To do away with reflex action, the spinal canals of the frogs used for the experiments were exhibited and the action of the heart withdrawn, but the local action of the solution named above remained the same. From the results of these experiments, an astringent action—*i. e.*, power of causing contraction of the tissues—can be ascribed with certainty only to the nitrate of silver and acetate of lead, while it is doubtful how much effect the solution of alum and the chloride of iron possess.

As to the tannic and its allied acids, they certainly do not have this power. W. A.

EMPLOYMENT OF TANNIC ACID INJECTIONS IN THE PARENCHYMATA (*Bull. Gén. de Thérap.*, 1876, v. ii. p. 191; from *German Medico-Chirurg. Rev.*, April, 1876, p. 300).—The uselessness of injections of alcohol into cancerous tissues decided Dr. Schwalbe to employ tannic acid in these cases. This acid possesses the property of destroying the cancer-cells and favoring absorption of the products. The author has attempted the use of this substance in injections into various tumors, and he has seen a malignant lymphoma of the neck diminish considerably under its influence. A tumor as large as a hen's egg, implanted upon the periosteum of the lower jaw, and the development of which had been very rapid, necrosed quickly under the influence of these injections, and soon fell off. Dr. S. has also used injections of tannic acid in neuralgia of the trigeminal with painful foci. These disappeared as if they had suddenly been struck with mortification, such as occurs in the pulp of a carious tooth. x.

NON-EXISTENCE OF MUCUS IN THE URINE.

—M. C. Méhu contributes an article on this subject to the *Bull. Gén. de Thérap.*, 1876, v. 2, p. 161, in which he shows that the substance usually known as urinary mucus consists, ordinarily, merely of epithelial or organic detritus, sperm, pus, phosphates, urates, or a mixture of these. In other words, that substance visible to the naked eye, and designated *mucus*, is nothing more than the normal or pathological sediment of the urine. Its aspect varies infinitely with the nature of the elements which go to make it up, and with the acid or alkaline condition of this liquid. Mucus contains mucine; the urine does not contain this substance. Finally, solutions of mucine, like those of sugar or albumen, offer nothing appreciable to the eye. It is, therefore, erroneous to give the name *mucus* to a detritus epithelial or otherwise in nature. x.

THE WARM BATH AS A PROPHYLACTIC AGAINST PUERPERAL FEVER.—Dr. Konitz, of Warsaw (*Wien. Med. Presse*, 1876, p. 1377), gives an account of two cases in which the warm bath employed immediately was followed by beneficial results. The first case, a multipara, who had lived some time in Russia, where she had previously used the bath, insisted, in spite of the doctor's arguments, upon using the hot bath at a temperature of 100° F., into which she was lifted immediately after the removal of the placenta. After remaining in it some little time she was removed to a warm bed, and soon fell into a sound slumber, from which she awoke to a speedy convalescence. The second case was also under Russian influence, and was a primipara whose confinement took place during an epidemic of puerperal fever, and whose midwife had been exposed to the contagion. She was placed in a hot bath, and recovered without an untoward symptom, while all the puerperal women in the neighborhood were dying or suffering from fever, or, at least, para- or peri-metritis. Konitz, therefore, urges the use of the hot bath after confinement, together with the administration of ergot and quinine. x.

POISONING BY DIGITALIS.—Könnhorn (*Centralbl. f. Med.*, 1876, p. 496; from Eulenberg's *Vierteljahrschr.*, xxiv, p. 278) gives two cases in which digitalis-leaves were taken with intent to prevent military conscription. One man took 13.7 grammes within four weeks, and died sud-

denly one day upon rising, having previously fainted when he rose on several occasions. The symptoms in both cases were those of severe gastric catarrh, which, however, was very striking from its stubbornness, from the appearance of illness presented by the patient, from the absence of fever, and from the progressive decrease in frequency of the pulse. Later, difficulty of swallowing supervened, and, shortly before death, singultus. Post-mortem examination showed lack of blood in the brain and larger vessels, thin, fluid blood of a dark cherry color, and injection with occasional ecchymoses in the mucous membrane of the stomach and small intestine; otherwise no organic disease. The presence of digitalis was established not only by chemical but by microscopical means, small particles of the digitalis-leaves being found in the contents of the stomach.

x.

SHOULDER PRESENTATION IN A FŒTUS PAST TERM; TETANUS UTERI; VERSION; DEATH.—Dr. T. Peszkowski (*Wien. Med. Presse*, 1876, p. 1351) gives the following case. He was called in consultation in the case of a multipara whose previous labors had been normal. Examination showed the shoulder presenting in the second position with descent of the right arm, which was exceedingly large. The patient was very much exhausted; there were no pains, but complete tetanus of the uterus. The child was dead. From the history given it was evidently hypermature. Peszkowski's colleagues recommended version, to which he demurred, because with so large a fœtus and such an unfavorable position, together with tetanus of the uterus, but little hope could be entertained for a result favorable to the mother. He recommended embryotomy. Peszkowski, however, was overruled, and attempted to perform version. The patient was etherized in order to overcome the tetanus uteri, and after twenty minutes Peszkowski succeeded in delivering the left foot as far as the knee. He then insisted that it was evidently impossible to proceed further with the version, but that there was still time to deliver by embryotomy, but being again overruled he declined to participate further in the procedure. The other physicians then continued the attempts to deliver by turning, but in vain. During the operation, however, rupture of the uterus took place. At length embryotomy was agreed upon, but

too late. The patient died just after delivery had been completed.

The lesson to be learned from this case is, according to Peszkowski, that that operation should be chosen which, after due consideration of the position of the fœtus and attending circumstances, seems most advisable, and that, after having once been chosen, the operation should be completed, and not substituted by another when half accomplished and not likely to succeed. Under these circumstances the patient is apt to be exhausted, and the second operation, although perhaps the best, is likely to fail also.

x.

MOLLUSCUM CONTAGIOSUM (Lukomsky: *Virch. Arch.*, Bd. lxx. p. 145).—Although molluscum contagiosum is by most writers classed with tumors of the sebaceous follicles, an examination of tumors of this kind, varying in size from a millet-seed to that of a pea, and taken from the skin of the penis and prepuce, showed that these follicles were not involved, but that it was solely an affection of the rete Malpighi of the skin. The so-called "molluscum bodies" which are found in the cheesy contents of the tumors are not of a parasitic nature, but are developed from cells which previously exist in the mucous layer of the rete.

In the corium which borders on the bases of the tumors were found, in addition to the usual cells, also large wandering cells. It may be the case that such cells find their way into the rete, and then under certain conditions develop into the characteristic elements of this disease.

W. A.

SPONTANEOUS DILATATION OF THE HEART, AND ITS CONSEQUENCES (F. Ganghofner: *Centralblatt für die Med. Wissenschaften*, 1876, No. 32).—Ganghofner confirms anew the occurrence of spontaneous dilatation of the heart, together with relative insufficiency of all the openings of that organ. As a cause for the existence of the first, he adduces anæmic and chlorotic conditions with congenital contraction of the aorta. As an illustration, he gives the history of a young girl in whom during life symptoms of insufficiency of the cardiac valves with attacks of palpitation had been observed. At the post-mortem examination no alteration of the valves was found, but only dilatation of the heart, together with changes of the other thoracic and some of the abdominal organs.

W. A.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 9, 1876.

EDITORIAL.

THE MEDICAL SERVICE OF THE
REVOLUTION.

OF the members of the American medical profession who are interested in out-of-the-way purely literary or historical researches, Dr. Toner, of Washington, is among the most active. Possessed of probably, next to the National Library, the best collection of medical Americana extant, having a natural bent towards historical studies, no wonder that he has entered upon the somewhat neglected field of the history of the American profession. Some of his productions have been monuments of labor; but none, to our thinking, has possessed the interest of his address recently delivered before the Alumni of the Jefferson Medical College, and now appearing as a book of nearly one hundred and fifty pages, under the title of "Medical Men of the Revolution." In it we may learn how much of labor our profession endured, and how much of sacrifice members of it made, not merely in the collection and care of the wounded, but also as patriots in legislative halls, or on the most dangerous of services, and as leaders in the thickest of the battle. It was to Drs. Joseph Warren and Samuel Prescott that the inhabitants of Concord owed their knowledge of the march of the British troops; and on the same day it was Dr. John Brooks who led the company of militia which so stoutly resisted the British onset at North Bridge. At Bunker's Hill there were present in various capacities thirty-one medical men, —some in the ranks, some as line officers, and some in their professional capacity; and the most famous of them all sealed his patriotism with his life's blood.

There does not seem to have been any regular plan of organization in the development of the medical department; but, as in other branches of the service, each step was the result of the exigencies of the moment, and was not always wisely taken. The establishment in Charlestown of the first hospital followed at once the battles of Lexington and Concord, and constituted the first organized medical service of the Revolution. Hospital after hospital appears to have been founded, and subsequently regimental surgeons and surgeons' mates were appointed. The rank of the hospital surgeon was at first made higher than that of the regimental surgeon. Different appointing bodies conferred commissions, and a condition of general discontent, if not of actual chaos, seems to have prevailed. On the 19th of July, 1775, Congress attempted to bring about a better state of things by an act giving form and consistency to the medical service. Dr. Benjamin Church was at once appointed director of and physician in the hospital. A man of fine address, and of high education and skill, distinguished among the earliest patriots for his ardor and enthusiasm, a member of the Provincial Congress of Massachusetts, he seemed eminently fitted for the position. To the astonishment, however, of every one, not many months subsequently he was detected in corresponding by cipher with persons inside of the enemy's lines. Shortly after his conviction by court-martial, Dr. John Morgan was elected as his successor. The success which had attended what is now the Medical Department of the University of Pennsylvania, under the guidance of Dr. Morgan, seemed a guarantee of his executive ability. Nevertheless, under his administration harmony did not prevail, and Congress was almost besieged with complaints, petitions, and suggestions. Much legislation was indulged in, but, being crude, imperfect, and often even contradictory, the natural result of the inexperience of the

legislators and the multiplicity of interests concerned, little good was accomplished. In October, 1776, the drift of public opinion was shown by the division of the United States into two medical districts and the appointment of Dr. William Shippen as medical director of the Southern Division, with rank equal to that of Dr. Morgan in the North. The growing unpopularity of Dr. Morgan or the growing popularity of Dr. Shippen was more signally evinced in January, 1777, by the summary dismissal from the service of Dr. Morgan. As shown by the present evidence, this dismissal appears to have been not only arbitrary but unjust: it is possible, however, that it was expedient. Indeed, a Congressional committee of inquiry subsequently exonerated Dr. Morgan, but justified the dismissal as demanded by public expediency.

In April of the same year, a series of medical regulations based upon those of the British army were adopted by the national assembly. Dr. Wm. Shippen was appointed director-general of all the hospitals. From this time may be said to date the efficient organization and the comparatively harmonious period of the medical service of the Revolution. Struggling against the innumerable difficulties of excessive poverty and of frequent defeat, by labor multiplied on the field and in the hospital, by suffering endured, and by steadfast courage, it certainly won at least the simple, yet highest, expression of award, "She hath done what she could."

SOME years since there appeared in one of the American professional periodicals—the *Boston Medical and Surgical Journal*, we think—an article on the great virtues of the *Ichthyocolla Spaldingiensis*. Subsequently, from the same pen, if we are not misinformed, were published in this journal some letters burlesquing the discoveries of Salisbury and the extravagant claims of the

possessors of one-fiftieth immersion lenses. Both of these articles were taken in sober earnest across the water, and gave rise to many grave doubts and expressions of wonder and disapprobation. All this did not exhaust our faith in human nature. But now we are despondent: we shall never again indulge in playfulness or irony: our cotemporary, the publisher of the *Pine Ridge* letters, has taken in serious earnest our recent jocosity about the superiority of the Philadelphia to the New York doctors.

The *Record* is equally severe in condemning our serious expressions of congratulation and thankfulness for the sanitary condition of the city during the summer, and finds especial fault with the sentence, "This summer has been extraordinarily healthy, and the water supply and the general hygienic arrangements have stood the very severe test so well as to reflect credit upon the city authorities and to demonstrate the great value of the homestead method of living practised in this city."

It is too late to enter into a controversy upon Centennial matters: the interest is gone. We shall not even waste space with justifying our former editorial. The facts that during the past summer, notwithstanding the sudden, unprecedented, and enormous increase of the population of our city, its mortality rate was much less than that of New York, and that, whilst in New York the Croton water was very bad, and so deficient as to call forth editorials, not only from the daily press, but from the *Medical Record*, praying for relief, in this city there was an endless supply of water containing only 1.74 parts of sewage to the million, ought to enable even the writer of the editorial in the *Record* to suspect why we congratulated ourselves that all was as well as it was.

THE recent English expedition to the North Pole, although fitted out with all

the care that modern science is capable of, was marked by a very fatal outburst of scurvy in the sledge-crews. It now appears that, in order to save weight, no rations of lemon-juice were taken by the sledge-parties. As no other cause for the suddenness of the outbreak is apparent, it would seem that the disease was kept at bay on shipboard so long as the men received their daily ration of lemon-juice, but that on the ice when this ceased scurvy burst forth.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

OCTOBER 4, 1876.

DR. ARTHUR V. MEIGS read notes of "*a case of thrombosis of the cerebral veins.*" A young woman, 20 years of age, who had suffered some time with extreme mental depression and anxiety, was attacked by vomiting and headache, without fever, followed by drowsiness, partial paralysis, and, later, choreic movements, sudden supervention of coma, and death.

The post-mortem examination showed firm clots in the veins of the corpora striata and the venæ Galeni, with extensive softening of the neighboring parts of the brain. The veins of the dura mater and circle of Willis were unaffected.

Dr. J. EWING MEARS read notes of a "*case of lacerated wound of the elbow-joint treated successfully by the antiseptic method of Professor Lister.*" Dr. Mears also read an account of a "*case of peripheral necrosis of the humerus,*" for which amputation at the shoulder-joint was successfully performed, and presented patient.

NOVEMBER 1, 1876.

Dr. JOHN J. REESE read a paper on "*the post-mortem imbibition of poisons: more especially in its medico-legal relations.*" In a late number of the *Times* a correspondent proposed the question whether the embalming a dead body by means of a solution of arsenic injected into the arteries might not be the means of arresting the arm of justice in a case where the death had been occasioned by poisoning with arsenic, the presence of the poison being ascribed to soaking of the embalming fluid employed? This query suggested the propriety of examining into the subject, with the following results:

The *post-mortem imbibition of poisons*, or the possibility of the absorption of a poison into the body after death, is a question of very considerable medico-legal importance. In order properly to appreciate its toxicological bearings it will be requisite to refer to two or three preliminary propositions.

The first of these is that a poison is *active*—i.e., is producing its deleterious effects—only while it is circulating in the blood. The remainder of the poison, however large the quantity may be, is totally inert *for the time being*. There is only one exception to this, the mineral acids and caustic alkalies, which, as is known, produce a direct destructive action upon the tissue with which they come in contact. Another proposition is, that no sooner does the absorbed poison find its way into the circulation than provision is made for its speedy separation and elimination through the medium of the different organs and tissues, more especially the liver, kidney, spleen, heart, and sometimes the brain and spinal cord; and many of these noxious agents—the mineral poisons particularly—may be readily discovered, soon after their administration, in the different secretions of the body. It is further to be remembered that when the absorbed poison has been separated by the different organs it is not retained by them for an indefinite period of time, but disappears or is re-absorbed in a period varying according to the kind of poison employed and according to the organ involved. Thus, *arsenic* has been detected in the human liver four hours after having been swallowed, and doubtless reaches it much earlier. Experiments on the lower animals go to show that arsenic is very completely diffused throughout the body in one hour and a half after being introduced. The human liver acquires its maximum of saturation, in the case of arsenic, in about fifteen hours after the ingestion of this poison: the quantity thus separated and capable of demonstration rarely ever exceeds two grains. After this period the amount discoverable gradually diminishes. The generally received opinion with regard to arsenic is, that if the individual poisoned survives sixteen or eighteen days there will be little, if any, probability of detecting the poison in the liver after death. As the vast majority of cases prove fatal within eighteen hours, the toxicologist has nearly always the opportunity (which he should never neglect) of discovering the metal in the liver and other organs of the body. This leads to the third proposition, which is that one of the very strongest proofs of death by poison is *not* the detection of the alleged poison in the stomach, since there may always be a possibility of its having been designedly introduced there after death, but its discovery in the absorbed state in the liver, kidneys, spleen, and other organs; the presumption amounting to almost an absolute certainty that the noxious substance thus detected was administered during life.

Keeping then in mind the fact that discovery of the absorbed poison in the tissues and organs of the deceased is regarded as irrefragable proof that the said poison was administered *during life*, it becomes a most interesting and important subject of inquiry, Is it possible for a poison to get access within a human body *after death*, and produce appearances in that body similar to, if not identical with, those resulting from swallowing the same poison during life?

There are only two methods by which a dead human body can receive a poison into itself: one, the *accidental*, as when, after burial in a soil that may chance to be impregnated with a poisonous material, in process of time, owing to the decay and disintegration of the coffin, the animal remains come into immediate contact with the poisoned soil; the other method the *intentional*, when the poison in solution has been purposely introduced through the œsophagus into the stomach or into the rectum, or hypodermically into the cellular tissue, or finally into the blood-vessels, as in the process of embalming, so called.

As regards the first of these methods, this would not be possible in the case of arsenic, since this is only present in cemetery soils in an insoluble condition. As regards the second method, the question is, whether it is possible for a poison existing in the stomach at the time of death (and the death not necessarily due to the poison), or introduced into the body after death, to be diffused through the body by imbibition, so as to be discovered *in the organs* by chemical analysis. Such a result is most certainly possible; and it is easily explained on the well-known physical law of *osmosis*.

Orfila's experiments show that solutions of arsenic, etc., injected into the stomach or rectum after death, are imbibed slowly and gradually through the coats of these viscera into the neighboring organs, affecting first and chiefly those nearest the stomach and rectum.

It needs no argument to show how easily the legal physician might be deceived in a case of this character, mistaking the effects of a simple imbibition or soaking of a poisonous solution which had been introduced designedly into the stomach or rectum after death, and very naturally attribute the results to poison really absorbed during life, and regard them, therefore, as affording unquestionable proof of the alleged crime. A case occurred in one of our Western States in which the suspicions were exceedingly strong that the poison had been thus designedly introduced after death for sinister purposes.

Dr. George McCracken, of this city, has made some experiments in this line recently, confining these for the present to the three poisons, arsenic, tartar emetic, and corrosive sublimate, injecting strong solutions of these mineral substances into the stomachs of dead animals, then burying them beneath the

ground, and disinterring them at different periods of time, so as to note the difference of result, as dependent on the length of time of burial. From these experiments he deduces the two following conclusions: First, if a solution of either arsenious acid, tartar emetic, or corrosive sublimate (and this is doubtless true of all other metallic solutions, and presumably true of the organic poisons likewise) be injected into a dog's stomach after death, it passes by osmosis through the coats of this organ into the adjoining viscera, and may be discovered in three weeks, by chemical analysis, in the spleen, the liver, and the left kidney; but not in the right kidney prior to the fifth week. The second conclusion is, that the arsenic solution penetrates through the stomach more rapidly and more completely than the other two substances employed.

In conclusion, the important practical question to be settled is this: Is it possible in an unknown case of poisoning, where the whole issue depends on the chemical discovery of the poison in the tissues of the body, to distinguish between poison really *absorbed* during life, and that which has been merely *imbibed* after death?

In reply, Dr. Reese would say that, if the opportunity were given to make a careful comparative analysis of the *interior* of the organ—the liver, for example—with the *exterior* of the same organ, especially if the examination were made not long after death, and poison were discovered in the interior as well as the external part of the organ, he should be disposed to regard it as evidence of really absorbed poison. But if the poison were found on the exterior alone, it should be regarded as a case of post-mortem imbibition. In a trial for the capital crime of poisoning, not merely proof of the detection of the alleged poison in the stomach should be demanded, nor even proof of its discovery in the organs and tissues of the body, but even farther than this, evidence clear and unmistakable of its detection in the interior of these organs; and farther still,—from what we now know,—in the brain and spinal cord.

REVIEWS AND BOOK NOTICES.

- A PRACTICAL TREATISE ON THE DISEASES, INJURIES, AND MALFORMATIONS OF THE URINARY BLADDER, THE PROSTATE GLAND, AND THE URETHRA. By SAMUEL D. GROSS, M.D., LL.D., D.C.L. Oxon., Professor of Surgery in the Jefferson Medical College of Philadelphia. Third edition, revised and edited by SAMUEL W. GROSS, A.M., M.D., Surgeon to the Philadelphia Hospital. 8vo, pp. 574. Philadelphia, Henry C. Lea, 1876.
- Few diseases cause more inconvenience and suffering than those of the bladder and

prostate; and, if we exclude cases of "stone in the bladder," few are less amenable to treatment, while none, successfully treated, redound more to the reputation of the physician and surgeon. These are therefore always profoundly thankful for information facilitating such treatment. In this instance we are especially indebted to Prof. Gross for permitting his valuable work to be revived, and to Dr. S. W. Gross for making it represent faithfully, as it does, the present state of our knowledge of the subject.

It is much to be regretted that this stage of our knowledge has not yet afforded us the means of a "cure" for chronic inflammation or "catarrh" of the bladder, as it is commonly called, which undoubtedly occurs independent of "stone," prostatic disease, or other cause of mechanical obstruction in men and of uterine displacement in women. Prof. Gross has, however, given us the benefit of an immense experience in the use of those remedies by which the troublesome affection may be partially relieved, and a judicious use of them often obtains excellent results. The appliances for washing out the bladder, as suggested by Dr. Keyes, of New York, and Zeissl, of Vienna, are very simple, and should make this useful method of treatment more commonly practised.

The excellent chapter on *retention of urine*, and its means of relief by catheterism, in which so much improvement has been made within the last ten years, by puncture and aspiration, we think will be found by the general practitioner the most useful in the volume. In it are found important additions by the editor, Dr. S. W. Gross. This gentleman has also contributed new chapters,—Tumors of the Bladder and Prostate,—in which a thorough knowledge of modern pathology is evident. The previously valuable chapters on "Stone" and its treatment have received all the additions which modern improvements, especially in lithotripsy, have made necessary. The chapter on "Stricture of the Urethra" is another in which the editor has had an opportunity, of which he has taken advantage, to contribute from his own experience, as well as from that of others who have greatly improved the treatment of this affection since the appearance of the last edition. In no part of the volume have we been personally so much interested as in the remarks upon the mortality after operations on the urethra. Dr. Gross is undoubtedly correct in ascribing the cause of death most frequently to chronic Bright's disease,—the contracted kidney,—in which it is true also that "neither tube-casts nor albumen may be present in the urine," but we believe very much less frequently than is commonly supposed. In consequence of the very small quantity of albumen and few casts usually present, they are often overlooked by resident physicians and others of inexperience, to whom examinations

in hospitals are intrusted, when careful examinations would have detected them. No surgeon who values his own reputation or his patient's life should operate on the urethra unless he is absolutely certain, from more than one careful examination, that Bright's disease does not exist.

There are a few trifling matters—modes of expression—belonging to a past period, which it seems to us might have been omitted in a book of to-day. We would ourselves prefer not to speak of "an exhalation of blood," or of an "exhalation of nervous sensibility," or to assign to "irritability of the bladder" almost the importance of a special disease rather than of a symptom. But, as stated, these are trifling points, perhaps matters of taste, and do not detract from the value of a work whose practical excellence should secure it a place on every physician's table.

J. T.

CHEMIA COARTATA, OR THE KEY TO MODERN CHEMISTRY. By A. H. KOLLMYER, A.M., M.D., Professor of Materia Medica and Therapeutics at the University of Bishops College, Professor of Materia Medica and Pharmacy at the Montreal College of Pharmacy, and late Professor of Chemistry, etc. Philadelphia, Lindsay & Blakiston.

This work, which is intended by the author to be useful as a sort of small but complete dictionary of chemistry, "to students intending to present themselves for examination," to "persons who have learned the old notation and wish to become acquainted with the modern system," to "those who desire to keep themselves posted on this subject, and who can thus easily refresh their memories without doing so at the expense of their other engagements," has certainly before it a wide sphere of a certain sort of usefulness, which it should in some measure at least succeed in filling. It is a collection of the principal facts connected with the various elements and more important compounds, gathered together in columns, and as a work of very ready reference can be recommended. For instance, under oxygen—the derivation of which word, by the way, is given as *oxus*, acid, and *genesis*, a generator!—we have given its synonyms, history, symbols, and the equations expressing the reactions resulting in its formation; and so for other substances.

In a work, however, such as this we have a right to demand an absence of contradictory and confusing statements; and though those which have struck our eye are such as can readily be altered in a future edition, they convey an idea of inaccuracy for which no cause should have been given. Thus, the author says that "an atom cannot exist alone as such; it must be united with another atom, and the two (or more, as is often the case) then constitute a molecule." Now, so far as regards elementary bodies, of which he is apparently speaking, there are certainly not many

which have more than two atoms in a molecule, while at the same time there are several of which the molecular and atomic weights are identical.

We are also given to understand that the atomicity of an element may vary indefinitely; that the same atom, as nitrogen, may be monad, dyad, triad, tetrad, and pentad; though a more correct view is given in an accompanying table, where nitrogen, though put down as I., III., and V., is not charged with being both artiad and perissad. The tables of reactions, etc., so far as we can see, seem correct; and we have no doubt that, as a sort of ready reckoner, the work will be of service in the annual cramming which takes place here and there before examinations; but for the purposes of study, the stories, though interesting, are altogether too short to be of much service.

H. H.

A TREATISE ON THE THEORY AND PRACTICE OF MEDICINE. By JOHN SYER BRISTOWE, M.D. Edited, with notes, by JAMES H. HUTCHINSON, M.D.

This is a work of a little over one thousand pages, into which are compressed the accounts not only of all diseases usually considered in treatises on practice of medicine, but also of some disorders often relegated to surgeons or specialists. The style is clear, the matter and method good, so that the book, although it is built upon no new principle, and contains nothing to claim our especial gratitude, is a good one,—a methodical reflex of the science and art of the day, out of which the student may pleasantly gather what he desires. We find, however, no reason why the practitioner, whose shelves groan with the numerous treatise of recent date on the practice of medicine, should add this to its predecessors. In other words, our judgment is that the author has performed his self-allotted task exceedingly well, but that at the present juncture no professional need existed for this work. The merits of the book will no doubt enable it to elbow for itself a place among the older favorites, and to divide the market with them. We leave it to do this, giving such aid as is furnished by the true assertion that whoever buys this book gets as complete a representation of modern medicine as has been, and probably can be, put inside of one thousand pages of similar size and type.

THE USE OF THE SPECTROSCOPE IN ITS APPLICATION TO SCIENTIFIC AND PRACTICAL MEDICINE. By EMIL ROSENBERG, M.D. The essay to which was awarded the Stevens' triennial prize for 1876 by the College of Physicians and Surgeons, March 1, 1876. New York, G. P. Putnam's Sons, 1876.

We are glad to welcome this book to our shelves, and take great pleasure in recommending it to all those who are interested in the subject of which it treats. The author has selected and arranged his material well, while

the reader is referred to all the more important monographs bearing on the subject, excepting the second part of Vievorald's book, which did not appear until after this was written. We know of no work on the subject, in any language, so well fitted for general use, and hope that it will obtain the circulation it deserves.

H. H.

GLEANINGS FROM EXCHANGES.

RESECTION OF THE ENTIRE UPPER JAW (*New York Medical Journal*, November, 1876; from *Arch. für klin. Chir.*, xix. 4, 1876).—

Braun reports two cases of this operation from the clinic of Prof. Simon. Both were followed by recovery, but death occurred after an interval of three and five months respectively, from recurrence of the disease, which was in one case epithelial cancer (originating in the skin over the nose), in the other small-celled sarcoma of the superior maxilla. Both patients developed great difficulty of vision,—an occurrence not hitherto noted after this operation,—and one suffered the loss of the left eye. The cause of these troubles the author finds in the contact of decomposing pus with the conjunctiva, and again in the injury done to the ophthalmic branch of the trigeminus by accumulation of pus within the skull (basilar meningitis). Chemosis and injection of the lower half of the eye, which have been frequently observed, are due to interference with the circulation by the incisions, and to injury of the infra-orbital nerve, which, by depriving the lower lid of its sensation, allows the irritation of dust or other foreign matter.

All operations hitherto reported may be arranged in three classes: first, cases of resection of the *entire* upper jaw for new growths; second, cases of *partial* resection for new growths, including those in which the entire jaw has been removed in two operations; third, cases of necrosis in which *entire* or *partial* resection has been performed. In the first class there are eleven operations, four of which were fatal (death due to exhaustion in two, pyæmia in one, and apoplexy in one), while seven were followed by immediate recovery. Of the latter, however, *five patients died within three to twenty-two and a half months from recurrence of the disease*. In the second class are five cases, all of which recovered, but were not seen subsequently. Of the third class six cases recovered, and one died, this being the only one in which the *entire* jaw was removed. One patient died a year after operation, from necrosis of the face of the skull and abscess of the brain.

TREATMENT OF URETHRAL STRICTURES BY MEANS OF INTERNAL MASSAGE (*New York Medical Journal*; from *L'Union Méd.*).—While formerly a thin bougie, after its intro-

duction into the stricture, was allowed to remain without being moved, Bardinet has adopted a method directly opposed to the former. The bougie, being introduced, is moved forward and backward, the motion being very moderate at first, but gradually increasing in extent until the instrument passes a track of from eight to ten centimetres. At the same time the bougie is also rotated; at first being held tightly in the stricture, it becomes perfectly loose after from ten to thirty movements. This process is continued with bougies gradually increasing in size. In allowing the bougie to remain quiet, the object was to prevent the annoying irritation of the urethral mucous membrane. But this is trifling when massage is employed, and diminishes in proportion as the bougie, after being moved back and forth several times, becomes looser. There is no contra-indication, therefore. The bougie should always be very well oiled. Experience has shown that fever, etc., is much rarer when this method, of so-called internal massage, is used.

HYDROPHOBIA FOLLOWING THE BITE OF A CAT (*New York Medical Journal*, November, 1876).—Messrs. Prevost and Saloz, of the Hospital of Geneva, report a case of this sort. After giving a detailed account, they conclude as follows:

1. The case is an example of the development of hydrophobia from the bite of a cat. Previously to wound of the patient, several hens and rabbits were bitten by the cat, and all died, probably of hydrophobia. At the time there were several cases of hydrophobia among dogs. It was not known whether the cat had been bitten.
2. Hydrophobia appeared in the woman forty-one days after the bite.
3. A few days before the symptoms of the disease appeared, the wound on the ear opened, and there was a serous discharge. The finger, hand, and arm became painful.
4. Morphia, subcutaneously in large doses, was of little use in calming the patient.
5. Inhalation of chloroform provoked violent spasms, so that its use was contra-indicated.
6. Injection of chloral in the veins brought about sleep, and a state of calm. The dose was repeated, and, in all, 17.50 grains were used in twenty hours.
7. The treatment was only palliative, as the patient finally died; but the benefit of chloral as relieving suffering seemed very marked.

THE PHYSIOLOGICAL ACTIONS OF COLCHICIN (*The Lancet*, September 23, 1876).—The most remarkable phenomenon that this agent produces is the complete loss of sensibility from paralysis of both the peripheric and centric nerve-endings. The reflex excitability is consequently abolished. On the other hand, the motor nerves and the muscles retain their excitability till death takes place.

In many animals the paralysis is preceded by a stage of excitation. That in frogs may rise in intensity till there is an outbreak of tetanic convulsions. The circulation of the blood is only slightly disturbed by the action of the poison. The heart continues to pulsate even after the paralysis of the central nervous system has commenced. The blood-pressure long remains unchanged, only sinking when the animal is moribund, and, in like manner, the paralysis of the inhibitory nerves of the heart occurs at a late period. The respiration becomes gradually less and less frequent, until it is entirely arrested, so that we must conclude that there is gradually increasing paralysis of the respiratory centre. In warm-blooded animals, and especially in cats, poisoned with colchicin, the mucous membrane of the whole gastric and intestinal tract is swollen and strongly injected, whilst the intestine contains bloody mucus. In consequence of this there are diarrhoea, vomiting, and colicky pains during life. The cause of the congestion has not as yet been ascertained. The fibres of the splanchnic and abdominal branches of the vagus are not paralyzed. The kidneys are strongly hyperæmic, and their secretions diminished. The action of colchicin takes place very slowly, death only occurring after several hours; and it is remarkable that, as was observed some time ago by Schroff, the amount of the dose has scarcely any perceptible influence on the intensity or rapidity of the action of the poison. A few centigrammes, and in cats even a few milligrammes, are sufficient to cause death, which results from arrest of the respiration, whilst the heart continues to beat for some time. In this stage tonic or clonic convulsions occur both in cats and rabbits, which Rossbach attributes to asphyxia. Doses smaller than are sufficient to cause death have scarcely any action.

TREATMENT OF TYPHOID FEVER BY ERGOT (*The Medical Record*, November 11, 1876).—At the meeting of the *Association Française pour l'Avancement des Sciences*, of August 23, M. Duboué, of Pau, stated that he had treated a number of cases of typhoid fever with ergot, and that his success has been satisfactory. The toleration of ergot increases with the severity of the disease. As a rule the drug is not so well tolerated by women as by men; consequently, it must be given in smaller doses to the former. It may be given without fear to pregnant women. The pulverized ergot of rye preserves all its medicinal qualities for about eight days; if it lose its physiological properties within that time, it is because it was already altered when pulverized. Of fifteen cases treated by Dr. Duboué, the extreme rapidity of the cure rendered the diagnosis of two uncertain; five cases of moderate gravity that recovered presented during their courses alternations of aggravation and amelioration that corresponded with

intentional interruptions of the treatment. Of eight very grave cases, six recovered; three of these cases being already far advanced before the ergot treatment was begun. In the two fatal cases the ergot did not produce its ordinary therapeutic effects, and on examination it was found to be worm-eaten and covered with a grayish powder.—*Gazette Hebdom. de Méd. et de Chir.*, September 1.

DIPHThERIA (*The Physician and Pharmacist*, November, 1876).—Dr. Rudolph Tauszky claims to have proved, in an elaborate paper, the correctness of the following propositions:

1. That diphtheria is dependent upon minute vegetable organisms, which invade the system through an abraded skin or abraded and inflamed mucous membrane.

2. That bacteria are easily distinguishable, microscopically, from detritus, fat, or albumen, by the glycerin, acetic acid, and heating test.

3. The contagion of diphtheria is not a gaseous substance.

4. It is most assuredly first a local disease, and, after existing a certain time, becomes general.

5. Catarrh, nasal and pharyngeal, one or both, always precedes it, or may be regarded as its first stage.

6. That croup and diphtheria are not identical diseases; croup exudations never enter the circulation; croup always remains a local disease, and kills only by mechanical obstruction, of the larynx for instance.

POISONING BY PARAFFIN (*The British Medical Journal*, October 14, 1876).—Dr. Robert Smith reports the case of a child four years of age, who was brought to his surgery, having swallowed a quantity of paraffin a few minutes before. The chief symptoms were those of suffocation, with a constant cough, though there was no expectoration. The tongue, gums, and cheeks were blanched and swollen where the oil had touched them, and the child's hands were raised to the throat. But there was no vomiting of any kind. The mouth and throat were washed with olive-oil with good effect; the distressing cough ceasing before he left. On going home, milk and castor-oil were ordered to be given; and in the evening the bowels had been freely moved, and the child had apparently quite recovered. There were no means of determining how much paraffin had been swallowed.

CORROSIVE SUBLIMATE AS A REMEDY FOR GONORRHOEA (*The Medical Record*, November 11, 1876).—During the last three years, Dr. Leopold Bruck, of Buda-Pesth, has given the bichloride of mercury a systematic trial in the treatment of blennorrhœa urethræ, and the following are the results of his experience:

1. Under the use of the sublimate, gonorrhœa is cured within six weeks, without the supervision of any of those complications that are met with when the treatment by injections is employed. The use of the remedy

may be begun in the so-called hyperæmic stage. The discharge is very profuse during the first ten days, and then gradually becomes less profuse and more serous; the burning pain and the chordee are not severe.

2. Spirits, coffee, and highly-spiced foods must be avoided during the treatment.

3. Purgatives are not required while the sublimate is being used.

4. The remedy sometimes causes cramps in the stomach and small intestine, and its use must then be intermitted for some days.

5. It must not be used when there is disease of the heart or lungs.

The sublimate should be given in pill form. During the first ten days, twenty pills, containing each $\frac{1}{4}$ gr. of mercury, should be given; the next twenty pills should contain $\frac{1}{8}$ gr. of the medicine, or they should be taken in half the time if the quantity remain the same.—*Centralblatt für Med. Wissenschaften*, July 1, 1876.

SUTURE OF THE SCIATIC NERVE (*The Lancet*, October 21, 1876).—In the Address in Surgery to the meeting of the British Medical Association in Sheffield, Mr. Favell alluded to a remarkable case in which Mr. Wheelhouse, of Leeds, inserted sutures into the ends of a divided sciatic nerve, with apparently the ultimate result of obtaining union between the two portions and restoring functional continuity. The same operation has since been performed by Langenbeck, and the details are given in a letter from Dr. Du Pré to the *Journal de Médecine* of Brussels. The sciatic nerve had been divided two years before by a fall upon a knife. The limb was wasted, and the outer part of the foot and leg was anæsthetic. A longitudinal incision was made over the cicatrix, and the two ends of the divided nerve were found two inches apart and surrounded by a considerable quantity of cicatricial tissue. Each extremity was considerably enlarged, the upper more than the lower. A small portion of the lower extremity was removed and examined for nerve-fibres, to ascertain whether its degeneration was so great as to preclude hope of recovery. Finding that it contained nerve-fibres, the extremity of the central portion was removed, and the knee being bent, the extremities were brought together and united by two ligatures of catgut, the wound closed, and the knee kept in the same position. The interference with the nerve was followed by no bad symptom, and two months afterwards, although there was no return of motor power, it was thought that sensation had improved, for the patient could indicate the place touched, where before there had been no sensitiveness.

PECULIAR FORM OF LUXATION OF THE EXTERNAL EXTREMITY OF THE CLAVICLE (*The Lancet*, October 14, 1876).—M. Nicaise reports the case of an old man, æt. 81, who was admitted to the hospital after having had a fall upon the back part of his shoulders. At first

sight the case appeared to be one of luxation of the head of the humerus forwards, several of the symptoms of that displacement being present. But upon closer examination it was easy to determine that the head of the humerus had not left its cavity, and that there was in reality a luxation of the clavicle, and not of the humerus.

The symptoms were briefly as follows. In front the internal extremity of the clavicle was prominent, the inferior and superior clavicular fossæ were effaced, and the distance between the middle line and the shoulder was diminished. At the shoulder the head of the humerus was found to be in its normal position. The articular surface of the acromion was found to be situated in front of the clavicle. Behind the acromion the external extremity of the clavicle could be readily distinguished. The articular surface of the latter was situated outside the acromion, and its anterior border corresponded with the posterior border of the acromial process. The head was slightly flexed, and turned towards the right. The elbow was separated from the body by a distance of ten centimetres. The spinal border of the scapula was prominent, and its inferior angle was pushed towards the spinal column. The movements of the arm were very limited, and caused much pain.

The patient was put under the influence of chloroform with the view of reducing the luxation, but this was found to be impossible: accordingly his arm was fixed in a sling.

M. Nicaise, who was doing duty at that time for M. Péan, proceeded to make some experiments upon the dead body, in order to determine the mode of production of this form of luxation. With the section of the acromioclavicular ligament it was impossible to produce the luxation. The trapezoid ligament was then cut, and it was then found easy to produce the desired displacement. The conoid ligament was left intact. From these experiments it may be inferred that the rupture of the trapezoid ligament is necessary for the production of this form of luxation.

MANSLAUGHTER BY RUPTURE OF THE SPLEEN (*The Lancet*, October 7, 1876).—A curious medico-legal point was involved in a recent trial for manslaughter in Ceylon. A coolie, in consequence of alleged impertinence, was treated with some violence by the superintendent of a plantation, and died almost immediately from—as the post-mortem examination showed—rupture of the spleen. The man had had fever lately. The spleen was large and soft; it had ruptured, and the peritoneal cavity was full of blood. It was urged for the defence that the spleens of coolies sometimes rupture spontaneously on severe muscular exertion, that the exertion of running away, as the coolie did, might have ruptured his spleen, and that death therefore would not be the direct result of the action of

the accused. Dr. Norman Chevers was quoted in support of the theory that the spleen might rupture under such circumstances, but it was discountenanced by the medical witnesses, and, we think, rightly. An accident so rare, and even doubtful, as such rupture of the spleen must be, cannot be allowed weight in the presence of evidence of direct violence. The chief justice ruled that, even if the diseased spleen would have caused the man's death sooner or later, the rupture was so distinctly the result of the violence that the prisoner could hardly have been acquitted of the charge of at least accelerating the death of deceased, and thus of manslaughter. The jury found the prisoner guilty, and he was sentenced to eighteen months' imprisonment with hard labor.

IDIOPATHIC GLOSSITIS (*The Boston Medical and Surgical Journal*, October 26, 1876).—Dr. E. H. Bradford reports the case of a young man, aged twenty, of an average healthy appearance, who presented himself for treatment, complaining of a swelling of the tongue. The night before his tongue began suddenly to enlarge without any known cause. There had been no injury to the tongue, and the patient had been taking no medicine. Two leeches were applied to the tongue on the advice of an apothecary, and ice was used.

On examination the tongue was seen to be swollen to more than double its normal thickness on the right of the median line; the swelling was greatest about two inches from the tip. Some swelling was to be seen also on the left side, and the edges seemed thicker than usual. The surface of the tongue was normal, with the exception of a few excoriations caused apparently by the friction of the teeth. The gums were healthy, and nothing unusual was to be seen on the fauces or pharynx. The mucous membrane beneath the tongue, covering the upper surface of the sublingual gland, appeared slightly swelled. There was no enlargement of the glands of the neck. Speech was not interfered with, and there was no pain or tenderness. The tumor, however, was quite hard, and felt like a circumscribed lump when taken between the thumb and forefinger.

The patient said that a year before his tongue became suddenly large in a similar way, the swelling commencing at night and increasing so that he could breathe only through his nostrils and feared he would be suffocated. On medical advice leeches were applied to the tongue and ice was used afterwards, and in a week or ten days the tongue assumed its normal size. The physician in charge, he claims, attributed the tumor to smoking.

The second attack passed off without any great trouble. The swelling diminished the next day under no treatment except ice, and a week later it had entirely disappeared.

On cross-questioning it was learned that the

patient had had a chancroid a few years previous, but no specific symptoms could be ascertained.

IODINE IN TYPHOID FEVER (*The Medical Record*, November 11, 1876).—Dr. G. M. Edebohls, house physician at St. Francis's Hospital, reports that in that institution iodine has usurped the place of the mineral acids, and is given internally in all cases of typhoid fever. It is thought to lessen the troublesome gastric irritability so often present, and to diminish the number of evacuations from the bowels.

The following formula is usually employed:

R Iodinii, ʒj;
Potassii iodidi, ʒij;
Aq. dest., ʒxx.

M.—Gtts. iij in wineglassful of water every three hours.

Lugol's solution, the liquor iodinii comp. of the Pharmacopœia, may be used in doses of six drops every three hours.

The cold bath, quinine, and iodine, with close attention to the diet and the exhibition of stimulants when indicated, constitute the main features in the treatment of typhoid fever. The cold wet pack is occasionally substituted for the cold bath when the latter is not well borne.

SALICIN IN THE CARDIAC COMPLICATIONS OF ACUTE RHEUMATISM (*The Lancet*, October 28, 1876).—Dr. T. MacLagan has arrived at the following conclusions with reference to the action of salicin in the cardiac complications of acute rheumatism:

1. That given sufficiently early and in sufficient dose, salicin prevents these complications.
2. That its free administration is the best means of staying their progress after they have occurred.
3. That such general treatment does not exclude the usual local measures,—leeching, poulticing, etc.
4. That the beneficial action of the salicin on the heart ceases when the temperature falls to the normal.
5. That salicin is powerless to remove the effusion which remains after the fever has ceased.

MISCELLANY.

MICROSCOPIC EXAMINATION OF THE CIRCULATION.—At the last meeting of the London Medical Microscopical Society, Dr. Pritchard exhibited an ingenious form of microscope by which the circulation of the blood in the frænum of the human tongue could be watched. The essentials of the instrument were a tube carrying an ocular and a No. 2 (Hartnack) objective; to the end of the latter was fitted a brass cap, from which a hollow rod of metal, of the size of a crowquill, and about an inch long, projected. The cap was centrally perforated. The narrow end of an ordinary ear

speculum was presented to the extremity of this small tube and held adjacent to it by a wire clip, and so arranged that microscope tube, metallic rod, and ear speculum had each its axis in the same straight line. To use it, the frænum linguæ was placed between the hollow rod and the speculum (the latter condensing the light), and when focussed, the circulation could be watched. We thank and congratulate Dr. Pritchard in the name of the profession upon the ingenuity of his invention, which will prove a valuable help in histological investigation.—*Med. Press and Circular*.

A REMARKABLE OCCURRENCE.—In the current number of the *Veterinary Journal*, a correspondent, an army veterinary surgeon, states that some men of the Native Infantry Regiment stationed at Cawnpore went out shooting, and in the course of the day came upon an antelope doe, which they immediately shot dead, and carried home. On opening the animal for the purpose of preparing it for the pot, they released a strong healthy youngster from the uterus, washed it, and induced it to suck milk from a bottle. "This little fellow is still living and thriving well under the care of the band-master of the regiment, by whom the above was related to me. Now, the peculiarity of the case is this,—that the time from when the mother was shot until the young one was released could not possibly have been less than twenty-five minutes. I have taken every care to verify the story, and can find not the least exaggeration in it."—*Med. Press and Circular*.

COMMUNICATION OF SYPHILIS BY MILK.—In the *Petersburg Med. Wochenschrift*, No. 23, 1876, M. R. Voss states that he inoculated three prostitutes with the milk of a woman who had a papular syphilide, with moist mucous papules on the genitalia and anus; the mammary glands were free. The milk was obtained by pressure, and a Pravaz's syringe was injected into each of the three prostitutes. In one, who was already syphilitic, no result was produced. The second had urethritis, and remained unaffected. In the third, a girl aged 16, who had not had syphilis, the injection was made on the eleventh day after her admission into hospital. Inflammatory swelling and suppuration took place, but were healed in a week. Forty days after the inoculation, a papular eruption appeared around the spot where the injection had been made, and five days afterwards a maculopapular syphilide with adenitis appeared over the body. These symptoms disappeared under the use of mercurial inunction.—*British Medical Journal*.

A CENTENARIAN.—A man named Alexander Macpherson died last week at a village near Glenborrodale, who was said to have reached the extraordinary age of 110. One of his sons is within two or three years of 80. The centenarian retained his good health to the last, moving about almost daily, looking

after his cattle, and feeding them himself night and morning.—*British Medical Journal*.

A NEW medical tax is announced from the Bureau of Medical Affairs in Berlin, of which the following are points: for a distance of two kilometres, or less, carriage fare and time cannot be charged (a kilo is about three-fifths of an English mile); for a distance of more than two kilos, carriage fare may be reckoned; night visits are those made between ten P.M. and seven A.M.; the amount of a single fee may depend upon the station in life, also upon the ability of the patient to pay and the severity of the case. The charge for the first visit at a patient's house is from two to six marks (a mark represents twenty-five cents of American specie); for every succeeding visit, one to three marks; for a night visit, six to eighteen marks; for an office visit, one to three, and for an office visit at night, three to nine marks.—*Boston Med. and Surg. Journ.*

SNAKES.—In 1875, 32,391 cobras were destroyed in Bengal alone, at a cost to the Government of 7807 rupees. The deaths of human beings in the same year from snake-bite appear to have been 8807 in Bengal, or an increase of 1212 on the number in the preceding year.

NOTES AND QUERIES.

MR. EDITOR,—With your permission I would like to say a few words in reply to Dr. Cotton's paper, and to any others who may have failed in my method of treating diphtheria.

I am sorry that I cannot give the doctor some practical lessons in my heroic manner of treating this disease, as everything depends upon the thorough application of the remedies prescribed, until they have accomplished the intended result.

I regret that the discussion of my paper referred to (in the *Medical Times* of October 14, 1876) was not published, as it would have explained more fully in detail my method of treating that disease than I feel like attempting to repeat on paper.

However, with the hope that I may benefit others, I will insist on a fair and earnest trial of the remedies and method of applying the same, which I have used with such wonderful success; and with that aim I will endeavor once more to indicate my treatment.

In mild cases and taken early, I begin by prescribing, for an adult—

℞ Acid. sulph. aromat., ℥ii;
Syrup. aurant. cort., ℥iii.—M.

Sig.—Teaspoonful every three hours, followed with a half wineglass of cold water to dilute the acid in the stomach.

For child from one to two years—

℞ Quiniaz sulphatis, grs. xli;
Acid. sulph. aromat., gttss. xxiv;
Syrup. aurant. cort., ℥iii.—M.

Sig.—Teaspoonful every three hours in the same manner as for adult.

I also give a saturated solution of chlorate of potash made with boiling water, ℥i to ℥ii, to be taken every two or more hours in doses to suit the severity of the disease and age of the patient. I also order one drachm of liquid persulphate of iron to a pint of cold water, to be used three or more times a day (by those who can) as a gargle. When the case is of a malignant character, I commence my treatment by giving, during the early stage of chill and aching of the system, quinia and tartar emetic; two grains of the former and one-twelfth of a grain of the latter every three hours for an adult until the fever is broken. At the same time I swab out the throat with a mop made of a piece of linen rag wrapped evenly around a small stick, the edge of the rag projecting about one-eighth of an inch over the blunt end of the stick, and revolved around until sufficient size, then securely tied, saturate it with the liquor ferri persulphatis and apply it to the membrane wherever found in the throat, and re-apply until every ves-

tige of the membrane is removed. This process should be repeated two or more times every day as long as the membrane continues to reform, and in the mean time the patient is to keep up the treatment prescribed above for mild cases, together with a generous diet of milk, beef-tea, etc.

Let me impress you with the importance of keeping the membrane cleaned off the throat as often as it reforms; and do not depend upon the mother or some inexperienced person to swab it, but see to it yourself, and you will have most gratifying results.

Very respectfully,
WM. L. STEWART,
Seventeenth and Filbert Streets, Phila.

TRANSACTIONS OF THE INTERNATIONAL MEDICAL CONGRESS.

Subscriptions for the forthcoming volume of Transactions of the International Medical Congress are now being received.

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OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 19, 1876, TO DECEMBER 2, 1876, INCLUSIVE.

GIBSON, J. R., ASSISTANT-SURGEON.—Assigned to duty as Chief Medical Officer of the Powder River Expedition. S. O. 156, Department of the Platte, November 16, 1876.

WILLIAMS, J. W., ASSISTANT-SURGEON.—Assigned to temporary duty with the troops at Washington Arsenal, D. C. S. O. 240, A. G. O., November 22, 1876.

McELDERRY, H., ASSISTANT-SURGEON.—Relieved from duty at Fort Monroe, Va., and assigned to temporary duty with the troops at Washington Arsenal, D. C. S. O. 242, A. G. O., November 24, 1876.

PATZKI, J. H., ASSISTANT-SURGEON.—To report to the Commanding Officer, Fort D. A. Russell, Wyoming Territory, for duty. S. O. 154 Department of the Platte, November 14, 1876.

DICKSON, J. M., ASSISTANT-SURGEON.—Assigned to duty with Sixteenth Infantry, in New Orleans, La. S. O. 224, Department of the Gulf, November 18, 1876.

HOFF, J. V. R., ASSISTANT-SURGEON.—To relieve Assistant-Surgeon Gibson from his duties as Post-Surgeon, Fort Fetterman, Wyoming Territory. S. O. 156, c. s., Department of the Platte.

BARNETT, R., ASSISTANT-SURGEON.—Assigned to duty with battalion of Third and Thirteenth Infantry in New Orleans, La. S. O. 224, c. s., Department of the Gulf.

CRAMPTON, L. W., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 132, Military Division of the Missouri, November 17, 1876.

TAYLOR, M. E., ASSISTANT-SURGEON.—Assigned to duty with battalion of Third and Thirteenth Infantry in New Orleans, La. S. O. 224, c. s., Department of the Gulf.

ROSE, G. S., ASSISTANT-SURGEON.—Died at Madison Barracks, Sackett's Harbor, New York, November 20, 1876.

LAUB, C. H., LIEUTENANT-COLONEL AND ASSISTANT-MEDICAL PURVEYOR.—Died at the Soldiers' Home, near Washington, D. C., December 2, 1876.